Remarks

This Amendment is in response to the Final Office Action mailed January 14, 2002. In the Office Action, the Examiner objected to the drawings, rejected claims 1-7, 26-28 under 35 U.S.C. § 102, and rejected claims 8-24 and 29-32 under 35 U.S.C. § 103. Claims 1-32 remain pending in the application. Reconsideration in light of the amendments and remarks made herein is respectfully requested.

Rejection Under 35 U.S.C. § 102

2.   The Examiner rejects claims 1-7, and 26-28 under 35 U.S.C. § 102(e) as being anticipated by the admitted prior art shown in Figure 2 of the present application.

To more clearly claim that which Applicants regard as the invention, independent claims 1, 8, 16, 21, and 26 have been amended to include that limitation of - having separate routing tables associated with each label (network).

The Examiner concedes that "Admitted prior art fig 2 fails to explicitly teach that maintaining a first and a second tables corresponding to the first and second VPN networks." (Page 3, Paragraph 4 of the Office Action dated 7-26-02) As a result of the amendment, the cited prior art Figure 2 does not teach every element of the claimed invention. Additionally, as argued below with respect to the § 103(a) rejection, this element is not taught or suggested by Figure 2 nor obvious in light of the prior art.

In light of the amendment and remarks made, Applicants submit that the rejection of claims 1-7, and 26-28 under 35 U.S.C. § 102(e) is now moot.

Rejection Under 35 U.S.C. § 103

4.   The Examiner rejects claims 8-20 and 29-32 under 35 U.S.C. § 103(a) as being unpatentable over the admitted prior art shown in Figure 2 of the instant application.

Applicants respectfully traverse.

The Office has the burden under 35 U.S.C. 103 to establish a *prima facie* case of obviousness. *In re Piasecki*, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787 (Fed. Cir. 1984).

To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification." *In re Linter*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

Here, Applicant submits that the cited prior art fails to teach or suggest the claimed limitation of having a separate routing table for each label (or VPN). The Examiner has not provided, and it is not apparent to Applicant, where in the admitted prior art Figure 2 such limitation can be found.

According to MPEP § 2143.01, "a statement that modifications of the prior art to meet the claimed invention would have been 'well within the ordinary skill in the art at the time the claimed invention was made' ... is not sufficient to establish a prima facie case of obviousness without some objective reason to combine the

teachings of the references." The teaching or suggestion to make the claimed combination must be found in the prior art, not in the applicant's disclosure. (MPEP § 2143)

The Examiner admits that, while "[a]dmitted prior art Figure 2 teaches [a] routing system wherein various VPN's can be unambiguously differentiated by indexing VPN-IDs stored in the routing table 206", it fails to teach maintaining separate tables corresponding to different VPN networks. (Office Action 7-26-02, Section 4) However, the Examiner argues that "one of ordinary skill in the art would have realized the storing device for the routing table 206 could be configured to support [a] plurality of tables, i.e., one table per VPN-ID." The Examiner adds that "the motivation would have been to support various private addressing spaces."

However, the Examiner's assertion that modifying the cited prior art Figure 2 to provide the claimed limitations to support various private addressing spaces is speculative. Applicants submit that, for a person of ordinary skill in the art, it would not have been desirable to use separate routing tables corresponding to separate VPN-IDs. In particular, it would not have been desirable to use separate routing tables for each VPN-ID as such architecture may introduce routing latencies and consume additional memory and processing resources than if a single routing table had been used for all VPN-IDs. Instead, a person of ordinary skill in the art would have been motivated to employ just a single table to support various private addressing spaces. Because there are many architectural and system-specific factors that determine whether a network routing system will perform better or worst under different conditions, it would not have been obvious to a person of ordinary skill in that art that modifying the cited prior art would produce a better routing system supporting multiple addressing spaces. As such, there is no motivation to modify Figure 2.

Since the admitted prior art Figure 2 does not teach or suggest the claimed elements and Examiner has not presented a clear and objective motivation for modifying the prior art as claimed, prima facie obviousness has not been shown.

In view of the remarks above, Applicants respectfully request that the rejection of claims 8-20 and 29-32 under 35 U.S.C. § 103(a) be withdrawn.

5.   The Examiner rejects claims 21-24 under 35 U.S.C. § 103(a) as being unpatentable over Bots et al., U.S. Patent No. 6,226,748 B1 in view of admitted prior art of Fig. 2.

To more clearly point out and distinctly claim the invention, Applicants have amended independent claim 21. In particular, independent claim 21 now claims "the modified packet based on a route table associated solely with the label, from among one or more separate route tables associated with different labels."

The Examiner asserts that the admitted prior art in Figure 2 includes the claimed element of – a route table associated with the label. However, Figure 2 does not illustrate any kind of unique association between a table and a label (e.g., a separate table for each label). Figure 2 only illustrates a single table 206 to route all packets regardless of the packet label.

Additionally, as argued above, the prior art does not teach or suggest the newly added limitation - a separate table associated with each label - nor is there a motivation to modify the prior art based on the knowledge of a person of ordinary skill in the art. Thus, claim 21 is patentably distinct from the asserted prior art. Claims 22-24 are also allowable by virtue of their dependence on claim 21.

In light of the amendment and remarks made, Applicants submit that the rejection of claims 21-24 under 35 U.S.C. § 103(a) is now moot.

No Grounds for Rejection

The Examiner did not provide grounds for rejection for claim 25 as required. Applicants respectfully request that the Examiner provide grounds for rejection of claim 25 or note whether it contains allowable subject matter.

Version With Markings to Show Changes Made

In the Claims

1   1.   (Amended) A router comprising:

2   a)   a first port for receiving a packet having a <u>first</u> label, a header and a payload;

3   b)   a <u>first</u> table<u>, from among one or more separate tables associated with</u>

4   <u>different labels,</u> associated with the <u>first</u> label; and

5   c)   a processor for processing the packet in accordance with the <u>first</u> table.

1   8.   (Amended) A method of routing in a network comprising:

2   a)   maintaining a first table corresponding to a first virtual private network;

3   b)   maintaining a second table corresponding to a second virtual private network;

4   and

5   c)   routing a packet based on <u>a pre-existing association with</u> the first table or the

6   second table.

1   16.   (Amended) A method of routing in a network comprising:

2   a) maintaining a first forwarding table corresponding to a first virtual private network;

3   b) maintaining a second forwarding table corresponding to a second virtual private

4   network; and

5   c) routing a packet based on <u>a pre-existing association with</u> the first forwarding table

6   or the <u>second</u> forwarding table.

1 21. (Amended) A network comprising:

2 a) a first edge router ~~coupled~~ configured to receive a packet having a header and to

3 transmit into a wide area network cloud a modified packet having a label and the

4 header;

5 b) a backbone router configured ~~coupled~~ to receive the modified packet and route

6 the modified packet based on a route table associated solely with the label, from

7 among one or more separate route tables associated with different labels; and

8 c) a second edge router configured ~~coupled~~ to receive the modified packet.

1 26. (Amended) A method of routing a packet comprising:

2 a) identifying, by a label, a packet including the label, a header and a payload

3 destined for a virtual private network (VPN);

4 b) identifying, from the label, a routing table associated with the VPN from

5 among multiple separate routing tables associated with different labels; and

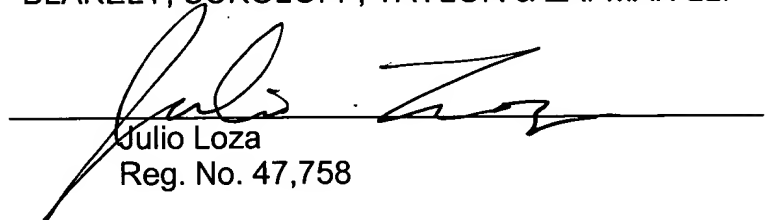6 c) facilitating routing of the packet to the VPN.

Conclusion

In view of the amendments and remarks made above, it is respectfully submitted that the pending claims are in condition for allowance, and such action is respectfully solicited.

Respectfully submitted,

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